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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,655	01/08/2002	Robert S. Cargill	55123P226	7010

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EXAMINER

CHOE, HENRY

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 05/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
10/042,655

Applicant(s)  
Cargill et al.

Examiner  
Henry Choe

Art Unit  
2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 8, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jan 8, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Zimmet (Fig. 6).

Regarding claims 1 and 3, Zimmet (Fig. 6) discloses an oscillator circuit comprising the method steps of providing a fundamental frequency using a Colpitts oscillator (208, 210), using circuitry (257, 259) coupled to the Colpitts oscillator (208, 210) to double the fundamental frequency, using circuitry (252, 254) coupled to the Colpitts oscillator (208, 210) to add a constant to the twice frequency signal component, using circuitry (240, 242, 220, 216, 218, 222, 244, 246) coupled to the Colpitts oscillator (208, 210) to multiply the constant plus twice frequency term, and the phasing (236, 238) and the relative weighting (201) of the twice frequency component being selected to increase the third harmonic relative to the fundamental frequency component.

Regarding claim 2, the multiplication of the stepd is done using a modulator having modulator switches (224, 226).

Regarding claim 4, the Colpitts oscillator (208, 210) is a differential Colpitts oscillator.

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmet

(Fig. 6).

Zimmet (Fig. 6) discloses an oscillator circuit comprising the method steps of providing a differential Colpitts oscillator (208, 210) which is operated into an inductive load (216, 218) in each leg of the differential oscillator, providing a pair of resonant circuits (216 and 220; 218 and 222), providing a current (a current flowing into the node of the resistors 212 and 214) responsive to the sum of the currents in the two legs (emitters of transistors 224 and 226) of the differential Colpitts oscillator (208, 210), and alternately switching (224, 226) the current of each of the two resonant circuits (216 and 220; 218 and 222) responsive to the voltage across the respective inductive load (216, 218). As described above, Zimmet (Fig. 6) discloses all the limitations in the claims except for that the voltage between the resonant circuits being a differential signal having a component at three times the fundamental frequency. It would have been obvious in the absence of unexpected results as a mere matter of design choice to choose the

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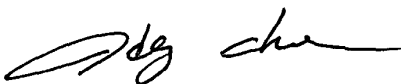
specific frequency range to obtain the desired fundamental frequency capacity based on the desired use since this is a result effective variable.

*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent numbers (5,959,504; 5,680,077) are the differential Colpitts oscillators.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Choe whose telephone number is (703) 305-0576.

A handwritten signature in black ink, appearing to read "Henry Choe", is written over a horizontal line.

Name: Henry Choe

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